

I claim:

1. An improved hand-holdable remote controller for
controlling a host device, said remote controller of the
type including a housing, an electrical power source,
5 electronic circuitry within said housing connected to said
power source and including an emitter for emitting
function-control signals from said housing, a plurality of
finger depressible buttons exposed on said housing and
interfacing with sensors electrically associated with said
10 circuitry for allowing user selection of function-control
signals emitted for controlling a host device; at least
one of said sensors capable of providing at least three
readable states of varied conductance, said states
dependant upon depressive pressure applied to the
15 variable-conductance sensor through depression of at least
one of said finger depressible buttons;

wherein the improvement comprises:

said circuitry including means for reading said at
least three readable states and for emitting distinct
20 function-control signals for each of at least two states
of said at least three readable states.

2. An improved hand-holdable remote controller for
controlling a host device, said remote controller of the
type including a housing, an electrical power source
25 within said housing, electronic circuitry within said
housing connected to said power source and including an
emitter positioned to emit function-control signals from
said housing, a plurality of finger depressible buttons
exposed on said housing and interfacing with sensors
30 electrically associated with said circuitry for allowing
user selection of function-control signals emitted for
controlling a host device; a plurality of said sensors
read by said circuitry as sensors having only two readable
states;

35 wherein the improvements comprise:

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at least one of said sensors structured as a pressure-sensitive variable-conductance sensor to provide at least three readable states of varied conductance, said states dependant upon depressive pressure applied to the variable-conductance sensor;

said circuitry including means for reading said at least three readable states and for emitting distinct function-control signals for each of at least two states of said at least three readable states.

3. An improved hand-holdable remote controller for controlling a host device, said remote controller of the type including a housing, an electrical power source within said housing, electronic circuitry within said housing connected to said power source and including an emitter positioned to emit function-control signals from said housing, a plurality of finger depressible buttons exposed on said housing and interfacing with sensors electrically associated with said circuitry for allowing user selection of function-control signals emitted for controlling a host device;

wherein the improvements comprise:

at least two of said sensors each structured to provide at least three readable states of varied conductance, said states dependant upon depressive pressure applied individually to the sensors of said at least two sensors;

said circuitry including means for reading said at least three readable states and for emitting function-control signals representative of each of at least two states of said at least three readable states;

a first sensor of said at least two sensors, said first sensor associated with a first button of said finger depressible buttons, said first button variably depressible to allow applying varied depressive pressure to said first sensor, said first sensor associated with

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means of said circuitry for reading said at least three readable states and emitting tuner channel-up selecting type of said function-control signals;

5 a second sensor of said at least two sensors, said second sensor associated with a second button of said finger depressible buttons, said second button variably depressible to allow applying varied depressive pressure to said second sensor, said second sensor associated with means of said circuitry for reading said at least three
10 readable states and emitting tuner channel-down selecting type of said function-control signals.

4. An improved hand-holdable remote controller in accordance with claim 3 wherein the first and second sensors are each elastomeric dome-cap sensors each
15 including a pressure-sensitive variably-conductive material positioned over proximal conductive circuit elements of said circuitry.

5. An improved hand-holdable remote controller for controlling a host device, said remote controller of the
20 type including a housing, an electrical power source within said housing, electronic circuitry within said housing connected to said power source and including an emitter positioned to emit function-control signals from said housing, a plurality of finger depressible buttons
25 exposed on said housing and interfacing with sensors electrically associated with said circuitry for allowing user selection of function-control signals emitted for controlling a host device; a plurality of said sensors read by said circuitry as sensors having only two readable
30 states;

wherein the improvements comprise:

at least one of said sensors structured as a pressure-sensitive variable-conductance sensor for varying conductance through at least three readable states, said

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states dependant upon depressive pressure applied to an associated finger depressible button; and

5 said circuitry structured for reading any one state of said at least three readable states, and for emitting by said emitter

a first signal type and

a second signal type, emission of either one of the signal types determined by an amount of time of depression of said button, and said second signal type further
10 including a signal representative of a depressive level of depressive pressure applied to said button.

6. An improved method of controlling a host device using a hand-held remote controller, the controller of the type including a housing, an electrical power source
15 within said housing, electronic circuitry within said housing connected to said power source and including a radiation emitter positioned to emit radiation from said housing, a plurality of finger depressible buttons exposed on said housing and interfacing with sensors electrically
20 associated with said circuitry for allowing user selection of function-control signals emitted as radiation by said radiation emitter for controlling a host device; at least some of said sensors being only ON/Off sensors, said controller further of the type wherein a user depresses
25 any one of said buttons to activate a related singular function-control signal, and releases the button to deactivate said function-control signal;

wherein the improvement comprises:

depressing, by the user, one of said buttons with any
30 user selectable pressure level of a plurality of user selectable pressure levels, said depressing of said button for activating one function-control signal of a plurality of activatable function-control signals associated with said button, whereby the user selects function-control
35 signals associated with said button by way of selecting

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~~the pressure applied to said button.~~

Sub 17 7. An improved method of controlling a host device according to claim 6 wherein said host device is a tuner for channel changing, and the method further comprises
5 manipulating channel change rate by selecting any said user selectable pressure level of said plurality of user selectable pressure levels associated with said button.

8. An improved method of controlling a host device
10 according to claim 7 wherein manipulating of channel change rate is such that channel change rate increases with increasing pressure applied to said button.

9. An improved method of controlling a host device according to claim 6 wherein said host device is a
15 recorded video player, and the method further comprises manipulating video play rate by selecting any said user selectable pressure level of said plurality of user selectable pressure levels associated with said button.

10. An improved method of controlling a host device
20 according to claim 6 wherein said host device is a recorded audio player, and the method further comprises manipulating audio play by selecting any said user selectable pressure level of said plurality of user selectable pressure levels associated with said button.

Sub 19 11. A method of manufacturing an improved hand-held
25 remote controller including the known prior art steps of: molding a housing; installing means for receiving a power source within said housing; installing electronic circuitry within said housing and connected to said means
30 for receiving said power source; connecting a radiation emitter to said circuitry and positioned to emit radiation

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from said housing; installing a plurality of finger depressible buttons with sensors electrically associated with said circuitry; said circuitry for reading a plurality of said sensors as sensors having only two
5 readable values; and

further including the novel combined steps of:

installing pressure-sensitive variable-conductance sensors activated by depression of said depressible buttons, said variable-conductance sensors structured to
10 provide at least three readable values, said values dependant upon depressive pressure applied to said depressible buttons;

installing circuitry for reading an immediate value of said at least three readable values of the pressure-sensitive variable-conductance sensors, and for outputting
15 from said emitter data representative of the immediate value,

whereby said improved remote controller is manufactured for outputting data representative of the
20 depressive pressure applied to said depressible buttons.

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